RICHARD O. SCHOFIELD, M. D. (Boulder City, Nevada). This paper brings out the many aspects which must be considered in arriving at a conclusion as to the ultimate cost of industrial care. Large industrial concerns long ago recognized the need for correlation of the various phases which involve the successful operation of the mandatory care for the injured workman. Because of the preëminent rôle that surgery must play in this whole scheme of affairs, these concerns are more and more centralizing the responsibilities of such a department into the hands of the industrial surgeon.

The first prerequisite for the successful direction of this departmental organization requires that the injured workman must be given the best care that modern medicine and surgery can provide; he must be treated as an individual, and never should his best interests be bartered for economic gain. Various other costs in such a department will vary according to the type of industry, the laws of the state in which the work is done, and the geographical hazards that may be peculiar at that location. Industrial Surgery in its fullest meaning contemplates the consideration of these and many other problems. The consummate total is the cost of industrial care.

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PHILIP STEPHENS, M. D. (1136 West Sixth Street, Los Angeles).—Doctor Carey's paper takes up a very important and pertinent question in these times of financial distress and industrial strife.

We are struck by the tendency of the working man to attribute more ills and disabilities to his work; to place more responsibility upon the employer and, furthermore, to bridge that gap which lies between care for industrial accidents and care of the ills and disabilities not directly attributable to industry.

The Government has bridged this gap, inasmuch as now practically all diseases of veterans, surgical or otherwise, irrespective of the financial condition of the ex-soldier, or whether or not the disability was contracted in line of duty.

The subject is one that should make us pause and think of what the future has in store for the profession, its private hospitals and set-up which our present system entails.

OCULAR COLOBOMA*

REPORT OF CASES

By CLINTON A. WILSON, M.D.
Santa Barbara

DISCUSSION *by Hans Barkan, M.D., San Francisco; George N. Hosford, M.D., San Francisco; Dohrmann K. Pischel, M.D., San Francisco.*

CASE 1.—The patient is a 26-year-old woman, with coloboma of the iris, as seen in the picture. The defect does not extend into the lens, pectinate ligament, and other deeper structures of the eye. Vision without correction is normal for each eye.

There is no similar thing in this patient's family history, which is known on both sides of the family for at least two generations back. There are no other children in the family. The father of this patient is about six diopters myopic, and the mother is about four diopters hyperopic.

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CASE 2.—This patient is a 36-year-old male, married, the father of one son. The iris defect is as shown in the photograph. This defect continues back to the optic nerve, involving the margin of the lens, pectinate ligament, vitreous and the choroid and the retina. There are also opacities scattered through this lens. The patient is color-blind in each eye. The uncorrected vision of the right eye is normal. The left eye is myopic. Vision can be brought to 20/100 with a S — 10.00 = C — 2.00 axis 90. This finding was quite a surprise to both patient and physician, as these colobomatous eyes are usually hyperopic and of poor vision. Careful examination of the right eye under the influence of a mydriatic failed to reveal any defect.

There is no similar defect in any of the patient's relatives, that he knows of, and the family history of the immediate past generation is well known to the patient. He is an only child. His son, who resembles the mother much more than he does the patient, has normal eyes. The son's color vision was normal to the Ishihara test.

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CASE 3.—The third patient is a male, about 32 years of age. It was impossible to get a good photograph of this patient or the fourth. Both have very dark brown eyes, which would not contrast satisfactorily with a black pupillary area. This third patient has a congenital coloboma downward in the left eye. The iris, lens, retina, and choroid are involved. There is a macular disturbance, chiefly choroidal, associated with the coloboma apparently, and vision with or without lens is confined to hand movements at two feet or less. The eye is hyperopic and the lens clear. The right eye is normal. The family history of this patient is not well known to him. He has no record or memory of any similar condition in any of his older relatives or in his three brothers and sisters. He is quite certain that none of his sisters or brothers have had the defect which he presents.

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CASE 4.—The patient is a male. Age now about six months. He was first seen at the age of one month and is the son of Patient 3. Both eyes of this patient are affected, the right more profoundly than the left. There are downward congenital coloboma in each eye. The right eye is noticeably smaller than the left in this patient, and the corneal diameter is obviously shorter. From birth there was an abnormally marked bilateral nystagmus. At the age of about three months the left eye commenced to fix and the right eye turned inward and has become, if anything, more unsteady in its attempt to fix. Slight wavering of the left eye persists, but is less than a few weeks after birth. The patient does see something with this left eye, as evidenced by following of light and grasping of objects brought to his vision. The congenital defect in this fourth patient involves the deeper structures of each eye, though the macular and paramacular region of this left eye are apparently spared. The eye is of a normal size at this time and appears to be the one upon which the boy will probably depend for his best vision in the future.

As to family history, the colobomatous eye of the father has been mentioned. The mother is about two diopters myopic, but otherwise normal; and this patient has two older sisters, about three years of age, who are quite normal in every respect and who resemble their mother in appearance much more than their father, whom this patient resembles most.

COMMENT

The embryology of these anomalies of both kinds, the typical and atypical, is a matter in which differences of opinion exist even after many penetrating studies.[7] Nonclosure of the fetal cleft accounts for the appearance of the typical variety, but the causes for nonclosure are not known. The explanations of Deutchmann and von Hippel are of a more speculative nature than that of von Szilly, who presents evidence from studies on rabbit embryos that there is a fundamental defect in the ectodermal anlage.[7]

The genesis of the atypical defects is explained, according to Rones, by persistence of the fetal notches, which always occur in the margin of the normal embryonic cup and which normally smooth out; this persistence being due to a loss from some unknown causes of the growth energy of the tissue at these points.[8]

* Read before the Eye, Ear, Nose and Throat Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

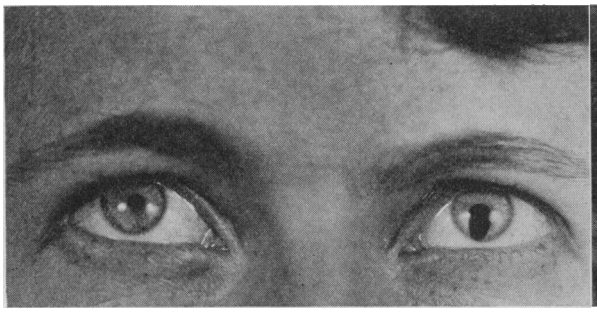

Fig. 1.—Patient 1, otherwise normal.

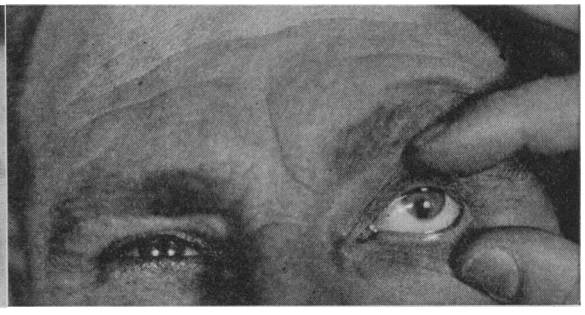

Fig. 2.—Deeper structures also involved, myopia 10 D. Unaffected eye normal.

We have here four patients with evidences of inheritance in one instance only—that of Case 4. There have been four chances for the appearance of the defect which has appeared in one case only. The son of Patient 2 has escaped any evidence of the defect, and he resembles the normal parent. The second chance is that of the twin girls, the daughters of Patient 3 and the sisters of Patient 4. These twins resemble the mother, who has no eye defect except slight myopia. At the third possibility, we have evidence of inheritance, and the inheritor of the condition strongly resembles one parent, suggesting that, perhaps, not only may there be a sex linkage, but also that the passage of these defects may be in some way associated with that rather obscure phenomenon of inheritance known as prepotence. Prepotency being a superior tendency or power of one parent in transmitting characteristics to offspring.

The rules of inheritance in these conditions have not retained their original simplicity. To the stated rule that coloboma are usually dominant in inheritance must be added the considerations of extent of the defect, of sex linkage, and possibly of prepotency.

There does not exist at this time sufficient evidence upon which to base accurate prediction of what will or will not be transmitted to an offspring.[1] These fetal cleft or typical coloboma which are not exceedingly rare show great anatomical differences from simplest indentation of the iris to large defects of the fundus, and the transmissibility of these defects may vary. There have been series of cases [3,4,6,7] of typical coloboma reported with good evidence of transmission, and also series in which inheritance has displayed a less noticeable part.[5] More typical cases have been reported than atypical ones.

It is safe and fair to say that those individuals should not reproduce who have the spontaneously occurring combined defects involving the deeper structures of one or both eyes, or who are defective individuals of family trees known to have produced or to be producing eye defects; and third, that reproduction is especially to be avoided by couples each of whom has these abnormalities.[1]

22 West Micheltorena.

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DISCUSSION

HANS BARKAN, M. D. (Stanford University Hospital, San Francisco).—While we can say of certain lesions that they are congenital, that does not mean that they are necessarily inheritable. In many instances inheritance of certain eye lesions has been traced back over 150 years. In others the same lesion appears as a new entity in the family tree under our observation. The difficulties of restricting offspring are, of course, great. Except in cases of high-grade albinism, Leber's disease, and retinitis pigmentosa, I feel that too much emphasis should not be placed on this point. Doctor Wilson has presented an interesting series which does show especially the prepotency of one parent. This is sometimes so marked that when it is known to be present, further children in the family are, of course, not desirable.

GEORGE N. HOSFORD, M. D. (490 Post Street, San Francisco).—I am sure we are all very grateful to Doctor Wilson for bringing these cases to our attention and recording them for the benefit of students of human biology. It is only by the study of such cases that we may eventually be able to predict the probability of their occurrence in children. According to Duke-Elder,[1] "their transmission varies very considerably in different pedigrees, the same defect appearing in one family as a dominant, in another as a recessive, and in another as a sex-linked character."

I recall one family in which the mother had an unilateral keyhole-shaped coloboma of the iris, but no other ocular defects. Her oldest child, a girl of ten, had the same condition in both eyes, but with no other ocular defects. The son, an infant of one year, had complete bilateral aniridia. I felt that a good deal might have been done to improve the optical efficiency of this child's eyes by tattooing the periphery of the cornea with the gold chlorid method, leaving the central area clear for a pupil. This idea did not meet with the approval of the parents,

1 Blacker, C. P.: Chances of Morbid Inheritance, William Wood & Company, Baltimore, 1934.

and so I did not have an opportunity to try it; but I feel that it would be an advisable procedure in such cases. It might even be useful in smaller colobomata of the iris, where dazzling may be a problem.

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DOHRMANN K. PISCHEL, M. D. (490 Post Street, San Francisco). — Doctor Wilson has presented a group of very interesting cases. I believe the study of such unusual cases is very valuable, not from the standpoint of the patients perhaps (for, unfortunately, we can do little for them), but from the standpoint of the doctor who makes the report. When we encounter unusual cases in the humdrum of our routine practice, we should seize the opportunity of studying them. The work of looking up the literature, studying other men's findings, and so forth, will prove stimulating to us and keep us from getting stale in our work.

Doctor Wilson has done this for himself and has given us, together with case reports, such a good résumé of the theory as to how these coloboma occur that there is nothing more for me to say on that score. However, I feel that we can do these adult patients a good service by pointing out that what vision they have will be kept. Furthermore, the possibility of having defective offspring should be pointed out to those who have a family history of this defect. And in children, by careful refraction, by reference to sight-saving classes, by instruction in eye hygiene, we can help them to develop and keep what vision they have.

DERMATOLOGIC PEN-POINTS

By MOSES SCHOLTZ, M.D.
Los Angeles

DISCUSSION *by Harry E. Alderson, M. D., San Francisco; H. J. Templeton, M. D., Oakland; Louis F. X. Wilhelm, M. D., Los Angeles.*

1. Do not forget that athlete's foot may attack any part of the body.

2. Remember that two per cent hydrarg. ammoniate is more effective than five per cent, and five per cent is more effective than ten per cent in impetigo, because of its irritating qualities.

3. Do not fail to watch a luetic patient under specific treatment for itching or macular papular rash on the arms and body. These symptoms may be the first danger signal of the impending arsenical dermatitis.

4. Do not call any sore in the mouth Vincent's infection. It may be any of a great number of conditions, including syphilis, beginning cancer, tuberculosis, etc.

5. Also the tongue is subject to a great variety of dermatologic conditions, including persistent paresthesias and hyperesthesias.

6. Poison oak is a very much abused dermatosis. Many skin lesions developing subsequently to it are taken for recurrences or sequelae, while actually they have nothing to do with it.

7. Pruritus ani is in many cases due to mycotic infection, and is relieved by mild fungicidal applications.

8. The individual variations of skin sensitivity (or is it psychologic aberrations of the patient?) often confound the best trained clinician. The patient claims irritation from a mild ointment, such as boric or zinc ointment, and claims relief from a "patent" (much more irritating) ointment, such as cuticura or resorcinol ointment.

9. Allergy in skin diseases is the latest cloak of our ignorance, an all-embracing term with no concrete clinical significance or any help in diagnosis in the majority of cases.

10. After all is said and done, clinical experimentation with food and contact with "allergic irritants" are the only reliable means of identification, and is superior to all fancy laboratory tests.

11. Remember there is no standard treatment for any skin condition, not even for scabies and impetigo. Even in these dermatoses, drug and dosage are often to be changed to suit the requirements and peculiarities of the individual case.

12. As to dietetic advice, the patient prefers to have a positive order and the list of specific foods which he can or must eat, rather than the negative order and the list of prohibited foods.

13. Remember that all well-marginated intertrigos with circinate borders are invariably infectious in character; they may be due to pyogenic microörganisms, fungi, monilias or other skin saprophytes, and respond best to antiseptic applications.

14. Lichen-like eruption appearing in a luetic during specific treatment is most likely due to arsphenamin or bismuth. The same is true of pityriasis rosea type of eruption.

15. Granuloma annulare, ivory-like, ring-shape, hard lesion (supposedly a mild tuberculide) occurring in children, is commonly mistaken for ringworm.

16. The latest list of exploded dermatologic therapeutic pretenders with euphonious and synthetic names includes phenyl-mercuric-nitrate ointment, quinolor ointment, absorbine, jr., thiocresol, benacol, etc.

17. The youngest of dermatologic fancies—palmar epidermophytids—did not establish its clinical legitimacy in spite of all theoretical claims.

18. Do not fail to tell female acne patients to avoid facial creams, rouge, and heavy cosmetic powders, as they counteract the best treatment. Only greaseless lotions are permissible in acne.

19. Also warn acne patients under x-ray treatment to avoid sunburn of the face, as it may precipitate x-ray intolerance of the skin.

20. Remember that the tip of the nose is the most troublesome and cosmetically responsible area. It shows the slightest scarring and discoloration. Avoid or reduce to minimum electrocautery and caustic, irritating applications.

21. Do not rush to make a diagnosis of pemphigus in suddenly appearing bullous lesions on the extremities; it may be simply insect bites, particularly those of spiders.

22. A dermatologic truism which will bear any number of repetitions: the greatest majority of therapeutic failures in skin diseases is due to overtreatment, the rest to faulty diagnosis.

23. Remember that ultra-violet light is not a panacea in skin diseases. In fact, in some dermatoses it is distinctly contraindicated and dangerous; such are cases of potential malignancy and lupus erythematosus.

24. The therapeutic skill of a clinician treating skin diseases with x-ray should be measured not